

SEQUENCE LISTING

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<120> Diagnostics and Therapy of Epstein-Barr Virus in  
Autoimmune Disorders

<130> OMRF 161 CIP Provisional

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<160> 113

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<210> 1  
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<223> Description of Artificial Sequence: Epstein-Barr  
virus Nuclear Antigen-1 Protein

<400> 1  
Pro Pro Pro Gly Arg Arg Pro  
1 5

<210> 2  
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<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Epstein-Barr  
virus Nuclear Antigen-1 Protein

<400> 2  
Gly Arg Gly Arg Gly Arg Gly Gly  
1 5

<210> 3  
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<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Epstein-Barr  
virus Nuclear Antigen-1 Protein

<400> 3

Arg Gly Arg Gly Arg Glu Lys  
1 5

<210> 4  
<211> 8  
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<223> Description of Artificial Sequence: Octapeptide

<400> 4  
Pro Pro Pro Gly Met Arg Pro Pro  
1 5

<210> 5  
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<220>  
<223> Description of Artificial Sequence: Octapeptide

<400> 5  
Pro Pro Pro Gly Ile Arg Gly Pro  
1 5

<210> 6  
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<220>  
<223> Description of Artificial Sequence: Octapeptide

<400> 6  
Pro Ala Pro Gly Met Arg Pro Pro  
1 5

<210> 7  
<211> 24  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Peptide from  
Epstein-Barr virus Nuclear Antigen-1

<400> 7  
Gly Ala  
1 5 10 15

Gly Ala Gly Ala Gly Ala Gly Ala

<210> 8  
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<220>  
<223> Description of Artificial Sequence: Octapeptide

<400> 8  
Pro Pro Pro Gly Met Arg Gly Pro  
1 5

<210> 9  
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<400> 9  
Gly Arg  
1 5 10 15  
Gly Arg Gly Arg Gly Gly Pro Arg Arg Arg  
20 25

<210> 10  
<211> 9  
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<220>  
<223> Description of Artificial Sequence: Phage

<400> 10  
Gly Pro Pro Pro Gly Met Arg Pro Pro  
1 5

<210> 11  
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<223> Description of Artificial Sequence: Phage

<400> 11  
Ser Pro Leu Ser Thr Leu Leu  
1 5

<210> 12  
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<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Phage

<400> 12  
Lys Ile Gly Phe Pro His Ile  
1 5

<210> 13  
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<220>  
<223> Description of Artificial Sequence: Phage

<400> 13  
Ile Pro Arg Pro Leu Asp Tyr  
1 5

<210> 14  
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<220>  
<223> Description of Artificial Sequence: Phage

<400> 14  
Met Lys Leu Lys His Pro Pro  
1 5

<210> 15  
<211> 7  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Phage

<400> 15  
Ile Leu Pro Pro Pro Gly Tyr  
1 5

<210> 16  
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<220>  
<223> Description of Artificial Sequence: Phage

<400> 16  
Ala Val Ile His Arg Pro Pro  
1 5

<210> 17  
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<220>  
<223> Description of Artificial Sequence: Phage

<400> 17  
Ala Leu Ile Gln Arg Pro Pro  
1 5

<210> 18  
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<223> Description of Artificial Sequence: Phage

<400> 18  
Val Pro Leu Thr Val Leu Leu  
1 5

<210> 19  
<211> 6  
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<400> 19  
Ser Pro Pro Glu Leu Lys  
1 5

<210> 20  
<211> 7  
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<400> 20

Lys Phe Leu Ala Pro Leu Gln  
1 5

<210> 21  
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<400> 21  
ccagaggtaa gtggactt  
18

<210> 22  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer  
  
<400> 22  
gaccggtgcc ttcttagg  
18

<210> 23  
<211> 58  
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aagacgattc ggggtgtgag gtgggtgtgg tccgtgtgtg atgtgtgtgg gtgggcag  
58

<210> 24  
<211> 32  
<212> PRT  
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<220>  
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from Epstein-Barr virus Nuclear Antigen-1

<400> 24  
Gly Gly Ser Gly Pro Gln Arg Arg Gly Gly Asp Asn His Gly Arg Gly  
1 5 10 15  
Arg Gly Arg Gly Arg Gly Gly Arg Pro Gly Ala Pro Gly

20

25

30

<210> 25  
<211> 20  
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<220>  
<223> Description of Artificial Sequence: Octapeptide  
from Epstein-Barr virus Nuclear Antigen-1

<400> 25  
Gly Gly Ser Gly Ser Gly Pro Arg His Arg Asp Gly Val Arg Arg Pro  
1 5 10 15

Gln Lys Arg Pro  
20

<210> 26  
<211> 8  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Octapeptide  
from Epstein-Barr virus Nuclear Antigen-1

<400> 26  
Arg Pro Gln Lys Arg Pro Ser Cys  
1 5

<210> 27  
<211> 17  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Octapeptide  
from Epstein-Barr virus Nuclear Antigen-1

<400> 27  
Gln Lys Arg Pro Ser Cys Ile Gly Cys Lys Gly Thr His Gly Gly Thr  
1 5 10 15  
Gly

<210> 28  
<211> 10  
<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Octapeptide  
from Epstein-Barr virus Nuclear Antigen-1

<400> 28

Gly Thr Gly Ala Gly Ala Gly Ala Gly Gly  
1 5 10

<210> 29

<211> 59

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Octapeptide  
from Epstein-Barr virus Nuclear Antigen-1

<400> 29

Gly Gly Arg Gly Arg Gly Gly Ser Gly Gly Arg Gly Arg Gly Gly Ser  
1 5 10 15

Gly Gly Arg Gly Arg Gly Gly Ser Gly Gly Arg Arg Gly Arg Gly Arg  
20 25 30

Glu Arg Ala Arg Gly Gly Ser Arg Glu Arg Ala Arg Gly Arg Gly Arg  
35 40 45

Gly Arg Gly Glu Lys Arg Pro Arg Ser Pro Ser  
50 55

<210> 30

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Octapeptide  
from Epstein-Barr virus Nuclear Antigen-1

<400> 30

Pro Arg Ser Pro Ser Ser Gln Ser  
1 5

<210> 31

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Octapeptide  
from Epstein-Barr virus Nuclear Antigen-1

<400> 31  
Gln Ser Ser Ser Ser Gly Ser Pro Pro Arg Arg Pro Pro Pro Gly Arg  
1 5 10 15

<210> 32  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Octapeptide  
from Epstein-Barr virus Nuclear Antigen-1

<400> 32  
Arg Pro Pro Pro Gly Arg Arg Pro Phe Phe His Pro Val Gly Glu Ala  
1 5 10 15

Asp Tyr Phe Glu Tyr His Gln Glu Gly Gly Pro Asp Gly Glu Pro  
20 25 30

<210> 33  
<211> 8  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Octapeptide  
from Epstein-Barr virus Nuclear Antigen-1

<400> 33  
Pro Asp Val Pro Pro Gly Ala Ile  
1 5

<210> 34  
<211> 9  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Octapeptide  
from Epstein-Barr virus Nuclear Antigen-1

<400> 34  
Pro Gly Ala Ile Glu Gln Gly Pro Ala  
1 5

<210> 35  
<211> 11  
<212> PRT  
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<220>  
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from Epstein-Barr virus Nuclear Antigen-1

<400> 35  
Asp Asp Pro Gly Glu Gly Pro Ser Thr Gly Pro  
1 5 10

<210> 36  
<211> 10  
<212> PRT  
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<220>  
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from Epstein-Barr virus Nuclear Antigen-1

<400> 36  
Gly Pro Ser Thr Gly Pro Arg Gly Gln Gly  
1 5 10

<210> 37  
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<220>  
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from Epstein-Barr virus Nuclear Antigen-1

<400> 37  
Gly Gln Gly Asp Gly Gly Arg Arg Lys  
1 5

<210> 38  
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from Epstein-Barr virus Nuclear Antigen-1

<400> 38  
Asp Gly Gly Arg Arg Lys Lys Gly Gly Trp Phe Gly Lys His Arg  
1 5 10 15

<210> 39  
<211> 12  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Octapeptide  
from Epstein-Barr virus Nuclear Antigen-1

<400> 39  
Gly Lys His Arg Gly Gln Gly Gly Ser Asn Pro Lys  
1 5 10

<210> 40  
<211> 11  
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from Epstein-Barr virus Nuclear Antigen-1

<400> 40  
Gly Gly Ser Asn Pro Lys Phe Glu Asn Ile Ala  
1 5 10

<210> 41  
<211> 9  
<212> PRT  
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from Epstein-Barr virus Nuclear Antigen-1

<400> 41  
Arg Ser His Val Glu Arg Thr Thr Asp  
1 5

<210> 42  
<211> 10  
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from Epstein-Barr virus Nuclear Antigen-1

<400> 42  
Arg Thr Thr Asp Glu Gly Thr Trp Val Ala  
1 5 10

<210> 43  
<211> 8  
<212> PRT  
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from Epstein-Barr virus Nuclear Antigen-1

<400> 43  
Gly Val Phe Val Tyr Gly Gly Ser  
1 5

<210> 44  
<211> 8  
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<220>  
<223> Description of Artificial Sequence: Octapeptide  
from Epstein-Barr virus Nuclear Antigen-1

<400> 44  
Phe Val Tyr Gly Gly Ser Lys Thr  
1 5

<210> 45  
<211> 11  
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from Epstein-Barr virus Nuclear Antigen-1

<400> 45  
Tyr Gly Gly Ser Lys Thr Ser Leu Tyr Asn Leu  
1 5 10

<210> 46  
<211> 8  
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<220>  
<223> Description of Artificial Sequence: Octapeptide  
from Epstein-Barr virus Nuclear Antigen-1

<400> 46  
Gly Met Ala Pro Gly Pro Gly Pro  
1 5

<210> 47  
<211> 8  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Octapeptide  
from Epstein-Barr virus Nuclear Antigen-1

<400> 47

Pro Gln Pro Gly Pro Leu Arg Glu  
1 5

<210> 48  
<211> 8  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Octapeptide  
from Epstein-Barr virus Nuclear Antigen-1

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Cys Asn Ile Arg Val Thr Val Cys  
1 5

<210> 49  
<211> 10  
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from Epstein-Barr virus Nuclear Antigen-1

<400> 49  
Arg Val Thr Val Cys Ser Phe Asp Asp Gly  
1 5 10

<210> 50  
<211> 10  
<212> PRT  
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<220>  
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from Epstein-Barr virus Nuclear Antigen-1

<400> 50  
Pro Pro Trp Phe Pro Pro Met Val Glu Gly  
1 5 10

<210> 51  
<211> 7  
<212> PRT  
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<223> Description of Artificial Sequence: Type III  
Peptide

<400> 51  
Ser Pro Leu Asn Val Leu Met

<210> 52  
<211> 7  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Phage Peptide

<400> 52  
Gln Leu Pro Pro Pro Gly Tyr  
1 5

<210> 53  
<211> 7  
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<220>  
<223> Description of Artificial Sequence: Phage Peptide

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Ile Leu Pro Pro Ser Gly Tyr  
1 5

<210> 54  
<211> 7  
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<223> Description of Artificial Sequence: Phage Peptide

<400> 54  
Val Leu Pro Pro Pro Gly Tyr  
1 5

<210> 55  
<211> 7  
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<223> Description of Artificial Sequence: Phage Peptide

<400> 55  
Val Leu Ala Pro Pro Gly Tyr  
1 5

<210> 56  
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<212> PRT

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<400> 56

Thr Leu Pro Pro Pro Gly Arg

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<210> 57

<211> 7

<212> PRT

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<223> Description of Artificial Sequence: Phage Peptide

<400> 57

Ala Arg Ile Leu Tyr Pro Pro

1

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<210> 58

<211> 7

<212> PRT

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<223> Description of Artificial Sequence: Phage Peptide

<400> 58

Ala Thr Ile Tyr Tyr Pro Asn

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<210> 59

<211> 7

<212> PRT

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<223> Description of Artificial Sequence: Phage Peptide

<400> 59

Ala Val Ile Asn Arg Pro Pro

1

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<210> 60

<211> 7

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Phage Peptide

<400> 60  
Ala Ser Ile Leu Arg Pro Pro  
1 5

<210> 61  
<211> 7  
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<223> Description of Artificial Sequence: Phage Peptide

<400> 61  
Ala Thr Ile Phe Arg Pro Ser  
1 5

<210> 62  
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<212> PRT  
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<223> Description of Artificial Sequence: Phage Peptide

<400> 62  
Ala Gln Ile Leu Arg Pro Leu  
1 5

<210> 63  
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<220>  
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<400> 63  
Gln Leu Pro Leu Ser Leu Val  
1 5

<210> 64  
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<400> 64  
Ser Pro Leu Ser Thr Leu Ile  
1 5

<210> 65  
<211> 7  
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<400> 65  
Ser Pro Leu Thr Thr Leu Leu  
1 5

<210> 66  
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<220>  
<223> Description of Artificial Sequence: Phage Peptide

<400> 66  
Ser Pro Leu Ser Thr Leu Arg  
1 5

<210> 67  
<211> 7  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Phage Peptide

<400> 67  
Ser Pro Ile Ser Thr Leu Ala  
1 5

<210> 68  
<211> 7  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Phage Peptide

<400> 68  
Ser Pro Leu Ser Ser Leu Thr  
1 5

<210> 69  
<211> 7  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Phage Peptide

<400> 69  
Ser Pro His Thr Thr Leu Trp  
1 5

<210> 70  
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<220>  
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<400> 70  
Ser Pro Tyr Thr Ile Leu Thr  
1 5

<210> 71  
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<220>  
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<400> 71  
Gln His Phe Lys His Pro Pro  
1 5

<210> 72  
<211> 7  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Phage Peptide

<400> 72  
Met Gln Lys Val Lys His Pro  
1 5

<210> 73  
<211> 7  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Phage Peptide

<400> 73

Ala Leu Lys Asp Lys Leu Pro  
1 5

<210> 74  
<211> 7  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Phage Peptide

<400> 74  
Ala Asn Leu Asp Lys Leu Pro  
1 5

<210> 75  
<211> 7  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Phage Peptide

<400> 75  
Ala Ala Gly Ile Lys Leu Pro  
1 5

<210> 76  
<211> 7  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Phage Peptide

<400> 76  
Lys Ile Gly Phe Pro Ile Leu  
1 5

<210> 77  
<211> 7  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Phage Peptide

<400> 77  
Tyr Leu Thr Pro Leu Gln Ile  
1 5

<210> 78

<211> 7  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Phage Peptide

<400> 78  
Ala Phe Leu Pro Thr Leu Gln  
1 5

<210> 79  
<211> 7  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Phage Peptide

<400> 79  
Ser Leu Phe Pro Trp Gln Arg  
1 5

<210> 80  
<211> 7  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Phage Peptide

<220>  
<223> XAA at site 1 and site 4 represent any amino acid

<400> 80  
Xaa Phe Leu Xaa Pro Leu Gln  
1 5

<210> 81  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Phage Peptide

<400> 81  
Val Pro Arg Pro Leu Asp Ile  
1 5

<210> 82  
<211> 7  
<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Phage Peptide

<400> 82

Asn His Ser Leu Pro Leu Pro  
1 5

<210> 83

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Phage Peptide

<220>

<223> XAA at site two represents any amino acid

<400> 83

Cys Xaa Leu Ser Val Leu Lys  
1 5

<210> 84

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Phage Peptide

<400> 84

Met Pro Tyr Met Met Tyr Gln  
1 5

<210> 85

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Phage Peptide

<400> 85

Ala Gly Arg Leu Gln Arg Thr  
1 5

<210> 86

<211> 7

<212> PRT

<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Phage Peptide

<220>  
<223> XAA at site 1 and 2 represents any amino acid

<400> 86  
Xaa Xaa Ile Gln Arg Pro Arg  
1 5

<210> 87  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Phage Peptide

<400> 87  
Arg Gln Pro Cys Tyr Ala Pro  
1 5

<210> 88  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Phage Peptide

<400> 88  
Gln Pro Thr Tyr Pro Thr Pro  
1 5

<210> 89  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Phage Peptide

<220>  
<223> Xaa at site 5 represents any amino acid

<400> 89  
Ala Thr Thr Gln Xaa Thr Trp  
1 5

<210> 90  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Phage Peptide

<400> 90  
Ile Leu Pro Leu Arg Gly  
1 5

<210> 91  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Phage Peptide

<220>  
<223> Xaa at sites 1,2 and 7 represents any amino acid

<400> 91  
Xaa Xaa Leu Ala Pro Pro Xaa  
1 5

<210> 92  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Phage Peptide

<400> 92  
Ala Lys Pro Phe Lys Thr Lys  
1 5

<210> 93  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Phage Peptide

<400> 93  
Met Pro Asn Pro Val Ser Gly  
1 5

<210> 94  
<211> 7  
<212> PRT  
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<220>

<223> Description of Artificial Sequence: Phage peptide

<400> 94  
His Pro His His Leu Pro Pro  
1 5

<210> 95  
<211> 7  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Type X Peptide

<400> 95  
Ser Pro Pro Glu Trp Leu Lys  
1 5

<210> 96  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Glycine

<400> 96  
Ser Pro Pro Glu Trp Leu Lys Gly  
1 5

<210> 97  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide

<400> 97  
Gly Pro Pro Pro Met Arg Pro Pro  
1 5

<210> 98  
<211> 26  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide from  
Epstein-Barr virus

<400> 98  
Gly Pro Gln Arg Arg Gly Gly Asp Asn His Gly Arg Gly Arg Gly Arg

1

5

10

15

Gly Arg Gly Arg Gly Gly Arg Pro Gly  
20 25

<210> 99  
<211> 13  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide from  
Epstein-Barr virus

<400> 99  
Gly Thr Gly Ala Gly Ala Gly Ala Arg Gly Arg Gly Gly  
1 5 10

<210> 100  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide from  
Epstein-Barr virus

<400> 100  
Ser Gly Gly Arg Gly Arg Gly Gly  
1 5

<210> 101  
<211> 12  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide from  
Epstein-Barr virus

<400> 101  
Arg Gly Gly Ser Gly Gly Arg Arg Gly Arg Gly Arg  
1 5 10

<210> 102  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide from  
Epstein-Barr virus

<400> 102  
Arg Ala Arg Gly Arg Gly Arg Gly Arg Gly Glu Lys Arg Pro Arg Ser  
1 5 10 15

<210> 103  
<211> 15  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide from  
Epstein-Barr virus

<400> 103  
Ser Ser Ser Ser Gly Ser Pro Pro Arg Arg Pro Pro Pro Gly Arg  
1 5 10 15

<210> 104  
<211> 25  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide from  
Epstein-Barr virus

<400> 104  
Arg Pro Pro Pro Gly Arg Arg Pro Phe Phe His Pro Val Gly Glu Ala  
1 5 10 15

Asp Tyr Phe Glu Tyr His Gln Glu Gly  
20 25

<210> 105  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide from  
Epstein-Barr virus

<400> 105  
Gly Pro Ser Thr Gly Pro Arg Gly  
1 5

<210> 106  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide from

Epstein-Barr virus

<400> 106  
Gly Lys His Arg Gly Gln Gly Gly Ser Asn  
1 5 10

<210> 107  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide from  
Epstein-Barr virus

<400> 107  
Gly Gln Gly Gly Ser Asn Pro Lys  
1 5

<210> 108  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide from  
Epstein-Barr virus

<400> 108  
Asn Pro Lys Phe Glu Asn Ile Ala  
1 5

<210> 109  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide from  
Epstein-Barr virus

<400> 109  
Arg Ser His Val Glu Arg Thr Thr  
1 5

<210> 110  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide from  
Epstein-Barr virus

<400> 110  
Val Phe Val Tyr Gly Gly Ser Lys Thr  
1 5

<210> 111  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Peptide from  
Epstein-Barr virus

<400> 111  
Gly Ser Lys Thr Ser Leu Tyr Asn Leu  
1 5

<210> 112  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Phage Peptides

<400> 112  
Ala Leu Ile Leu Arg Pro Pro  
1 5

<210> 113  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Phage Peptides

<400> 113  
Ala Met Lys Leu Lys Leu Pro Pro  
1 5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:27

Asp Gly Gly Arg Arg Lys Lys Gly Gly Trp Phe Gly Lys His  
Arg

1 5 10 15

(2) INFORMATION FOR SEQ ID NO:28:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:28

Gly Lys His Arg Gly Gln Gly Gly Ser Asn

1 5 10

(2) INFORMATION FOR SEQ ID NO:29:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 8 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:29

Gly Gln Gly Gly Ser Asn Pro Lys

1 5

(2) INFORMATION FOR SEQ ID NO:30:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 8 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:30

Asn Pro Lys Phe Glu Asn Ile Ala

1 5

(2) INFORMATION FOR SEQ ID NO:31:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 8 amino acids
- (B) TYPE: amino acid

- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL: NO
- (iv) ANTI-SENSE: NO
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:31

Arg Ser His Val Glu Arg Thr Thr  
1 5

- (2) INFORMATION FOR SEQ ID NO:32:
- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 9 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL: NO
- (iv) ANTI-SENSE: NO
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:32

Val Phe Val Tyr Gly Gly Ser Lys Thr  
1 5

- (2) INFORMATION FOR SEQ ID NO:33:
- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 9 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL: NO
- (iv) ANTI-SENSE: NO
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:33

Gly Ser Lys Thr Ser Leu Tyr Asn Leu  
1 5

- (2) INFORMATION FOR SEQ ID NO:34:
- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 8 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL: NO
- (iv) ANTI-SENSE: NO
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:34

Gly Met Ala Pro Gly Pro Gly Pro  
1 5

(2) INFORMATION FOR SEQ ID NO:35:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 8 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL: NO
- (iv) ANTI-SENSE: NO
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:35

Pro Gln Pro Gly Pro Leu Arg Glu

1 5

(2) INFORMATION FOR SEQ ID NO:36:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 8 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL: NO
- (iv) ANTI-SENSE: NO
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:36

Cys Asn Ile Arg Val Thr Val Cys

1 5

(2) INFORMATION FOR SEQ ID NO:37:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 10 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL: NO
- (iv) ANTI-SENSE: NO
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:37

Arg Val Thr Val Cys Ser Phe Asp Asp Gly

1 5 10

(2) INFORMATION FOR SEQ ID NO:38:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 10 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL: NO
- (iv) ANTI-SENSE: NO
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:38

Pro Pro Trp Phe Pro Pro Met Val Glu Gly  
1 5 10